
WARREN COUNTY

(Warren County Water Service Area Map)

- Estimated 1999 population of 83,200--98% on public water
- Estimated 2020 population of 94,700--99% on public water
- 970 miles of water lines, with plans for 45 additional miles
- Estimated funding needs for public water 2000-2005--\$77,735,000
- Estimated funding needs for public water 2006-2020--\$57,227,000

Warren County had an estimated population of 83,215 (34,918 households) in 1999 with a projected population of 94,716 (42,741 households) in 2020. Population studies indicate growth in Warren County at a steady rate. Almost 98% of the county is currently served by public water systems. 65% of those not on public water rely on private wells. About 225 new households will be placed on public water through line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
WARREN								
BOWLING GREEN MUNICIPAL UTILITIES				40,000		17,000	6,000	63,000
WARREN COUNTY W/D	20.9	39	735	7,000			7,000	14,735
WARREN COUNTY TOTAL	20.9	39	735	47,000		17,000	13,000	77,735

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
WARREN								
BOWLING GREEN MUNICIPAL UTILITIES				30,000		13,000	3,400	46,400
WARREN COUNTY W/D	22.2		100	7,881			2,846	10,827
WARREN COUNTY TOTAL	22.2		100	37,881		13,000	6,246	57,227

WATER SERVICE AREAS

WARREN COUNTY

Kentucky

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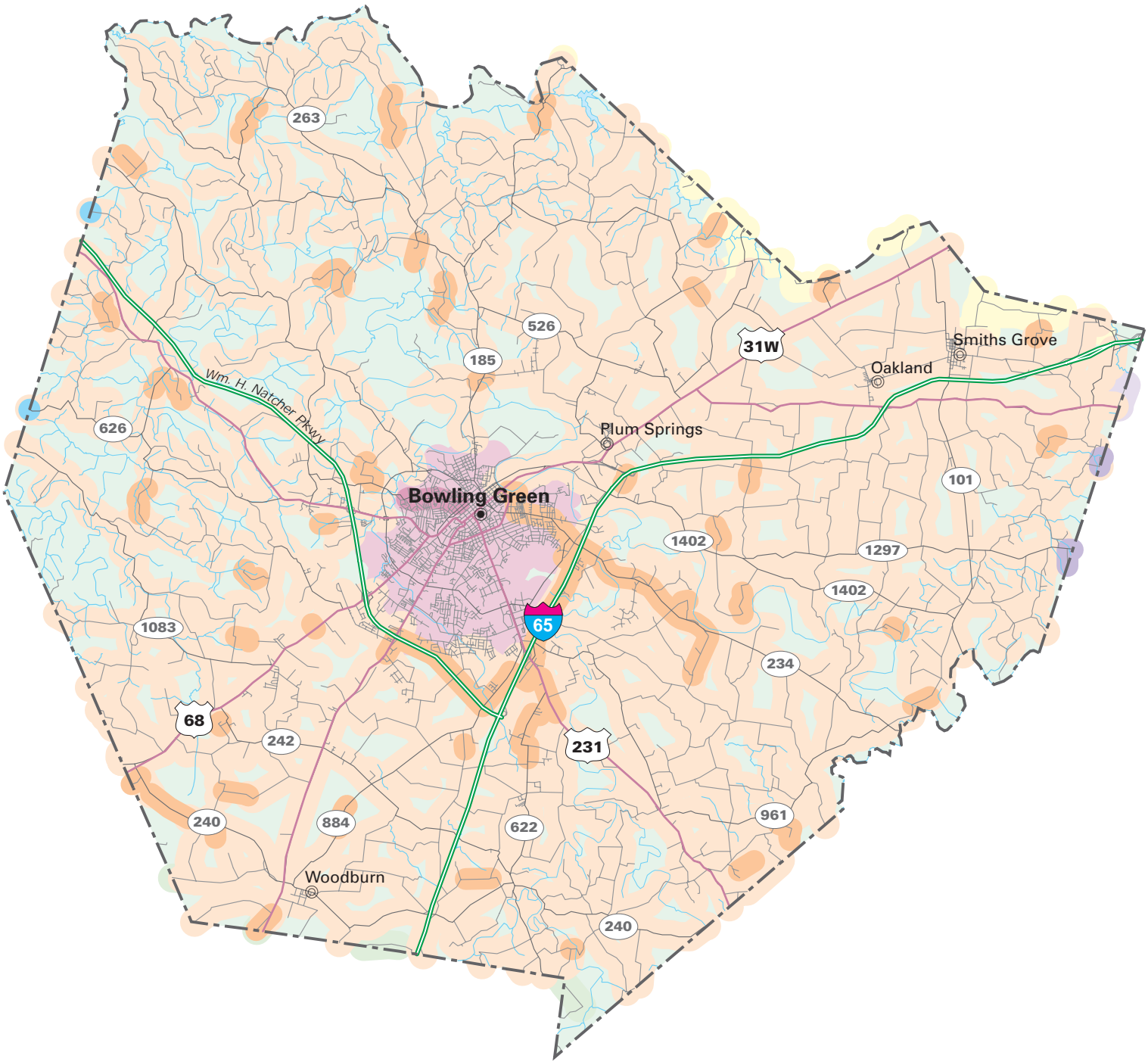
Bob Arnold, Chairman
Lawrence Wetherby, Executive Director



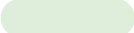
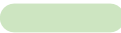








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WATER SERVICE STATUS BY OWNER		
EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		WARREN COUNTY WATER DISTRICT
		SIMPSON COUNTY WATER DISTRICT
		GLASGOW WATER COMPANY
		EDMONSON COUNTY WATER DISTRICT
		BUTLER COUNTY WATER SYSTEM INCORPORATED
		BOWLING GREEN MUNICIPAL UTILITIES

PUBLIC WATER SYSTEMS

Either the Warren County Water District or Bowling Green Municipal Utilities presently provide water for 31,555 households in Warren County.

WARREN COUNTY WATER DISTRICT

PWSID: 1140487
System Type:..... COMMUNITY
Owner Type: WATER DISTRICT
Surface Source:..... BARREN RIVER LAKE
Purchase Source: KELLY VANCE
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD):..... 0.50
Percent Daily Average Production:..... 0.00
Total Tank Storage Capacity (gallons): 6,207,000.00
Total Service Connections: 17,135.00
Number of Employees:..... 31.00
Treatment Operator Class: 4D
Distribution Operator Class:..... 3A
Customer Rate for 1,000 Gallons:..... 3.24
O/M costs 1997: 2,927,494.62
O/M costs per Service Connection: 173.10
Net Revenue 1997: 830,406.26
Total Water Produced 1997 (gallons):..... 129,430,000.00
Water Sold 1997 (gallons): 1,837,792,265.00
Unaccounted-for Water 1997 (%): 7.31

Warren County Water District gets its water from the Barren River and Plum Springs, which, according to the Warren County Water Supply Plan is an adequate supply of raw water to meet future needs. The District currently serves 15,958 households in Warren County. The District operates a treatment plant, which can produce 500,000 gallons per day and also purchases water from Bowling Green Municipal Utilities water treatment plant, which can produce 22.5 million gallons per day. The District's treatment plant, on an average day, produces about 354,602 gallons, while the BGMU plant produces about 17 million gallons. There is no set limit on the amount of water that the District can purchase from BGMU. The District storage system consists of 24 tanks with a combined capacity of 6,207,000 gallons. The calculated charge for 5,000 gallons of treated water (residential use) is currently \$16.19. Warren County Water District has 31 employees with two certified as water treatment plant operators, three certified to operate a distribution system, and four for billing and financial concerns.

The need for water service expansion in the Warren County Water District results from rapid growth in Warren County and aging infrastructure. In order to serve these households, the District distribution system may require upgrades to increase and maintain an adequate flow and pressure.

BOWLING GREEN MUNICIPAL UTILITIES

PWSID: 1140038
System Type: COMMUNITY
Owner Type: MUNICIPAL
Surface Source: BARREN RIVER LAKE
Purchase Source:
Well Source:
Sells Water to: WARREN COUNTY WATER DISTRICT
Treatment Plant Capacity (MGD): 22.50
Percent Daily Average Production: 73.00
Total Tank Storage Capacity (gallons): 8,000,000.00
Total Service Connections: 15,377.00
Number of Employees: 161.00
Treatment Operator Class: 3D
Distribution Operator Class: 4A
Customer Rate for 1,000 Gallons: 1.87
O/M costs 1997: Not available
O/M costs per Service Connection: Not available
Net Revenue 1997: Not available
Total Water Produced 1997 (gallons): Not available
Water Sold 1997 (gallons): Not available
Unaccounted-for Water 1997 (%): Not available

The Barren River supplies Bowling Green Municipal Utilities (BGMU) raw water. BGMU has 15,597 water customers. BGMU is also the primary provider of water for the Warren County Water District. The BGMU water treatment facility is currently capable of producing 22.5 MGD. The utility is in the process of upgrading the plant to 30 MGD. The plant's daily average is 17 million gallons. The utility has three, one million-gallon tanks and one, five million-gallon tank, for a total storage capacity of eight million gallons. This does not include clear-well storage. The charge for 5,000 gallons of water (residential usage) is \$9.34. BGMU has 161 full-time employees, thirteen of whom are class four water treatment plant operators.

The need for upgrade is due to aging infrastructure. BGMU's intention is to replace all four and six inch water mains. The mains are cast iron and have years of calcium and magnesium build-up in them. Seasonal temperature changes frequently cause hubs to leak requiring

excavation and costly repair. The need for system expansion is caused by increased subdivision construction (residential and commercial) in Warren County. The estimated population served by BGMU in the year 2020 is 95,000, which includes Warren County Water District customers, since the district is largest BGMU customer.

PRIVATE DOMESTIC SYSTEMS

About 1,700 people in Warren County rely on private domestic water supplies: 1,100 on wells and 600 on other sources.

In most of the regions of Warren County more than three-quarters of the drilled wells in the uplands are adequate for a domestic supply. Yields as high as 50 gpm have been reported from wells penetrating large solution channels. In the northwest corner of the county and in low-lying areas of the Barren River and its main tributaries most wells are inadequate for domestic use unless the well intercepts a major solution opening in the limestone in which the yield could be very large.

Springs with flows ranging from a few gallons per minute too 2000 gpm are found in the county. Minimum flow generally occurs in early fall, maximum flows in late winter.
